

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

1. (Currently Amended) A polynucleotide that is regulated by a ~~polypeptide~~ peptide effector comprising:
a regulatable, catalytically active polynucleotide having a catalytic domain and a regulatory domain, wherein the catalytic activity of the catalytic domain is regulated by the interaction of the peptide effector with the regulatory domain, ~~wherein the peptide interacts with the polynucleotide to affect its catalytic activity.~~
2. (Currently Amended) The polynucleotide of claim 1, wherein the ~~polypeptide~~ peptide effector is further defined as being a protein.
3. (Currently Amended) The polynucleotide of claim 1, wherein the ~~polypeptide~~ peptide effector comprises a peptide of between about 7 and 20 amino acids.
4. (Currently Amended) The polynucleotide of claim 1, wherein the ~~polypeptide~~ peptide effector comprises a peptide of between about 7 and 12 amino acids.
5. (Currently Amended) The polynucleotide of claim 1, wherein the catalytic activity of the ~~nucleic acid~~ catalytic domain is specific for a nucleic acid target sequence.
6. (Currently Amended) The polynucleotide of claim 1, wherein the catalytic activity of the ~~nucleic acid~~ catalytic domain is ~~regulated by the interaction of the nucleic acid with an effector~~ ligation.
7. (Original) The polynucleotide of claim 1, wherein the polynucleotide comprises RNA.
8. (Original) The polynucleotide of claim 1, wherein the polynucleotide comprises DNA.

9. (Original) The polynucleotide of claim 1, wherein the polynucleotide is at least partially single stranded.
10. (Original) The polynucleotide of claim 1, wherein the polynucleotide is at least partially double stranded.
11. (Original) The polynucleotide of claim 1, wherein the polynucleotide comprises at least one modified base.
12. (Currently Amended) The polynucleotide of claim 1, wherein the peptide effector is endogenous.
13. (Currently Amended) The polynucleotide of claim 1, wherein the peptide effector is exogenous.
14. (Currently Amended) The polynucleotide of claim 1, wherein the peptide effector comprises a phosphorylated peptide.
15. – 127. (Cancelled)
128. (Currently Amended) A vector comprising: a regulatable, catalytically active polynucleotide having a catalytic domain and a regulatory domain, wherein the catalytic activity of the catalytic domain is regulated by the interaction of a peptide effector with the regulatory domain, wherein the peptide molecule interacts with the polynucleotide to affect its catalytic activity.
129. – 136. (Cancelled)
137. (New) The polynucleotide of claim 1, wherein the catalytic activity of the catalytic domain is cleavage.